

ABSTRACT OF THE DISCLOSURE

Based on link security method to be discussed in IEEE (Institute of Electrical and Electronics Engineers) 802, for which standardization is to progress while centering on IEEE 802.3 and 802.1d, provided is an authentication method capable of allowing an OLT
5 to implement functions of a RADIUS server to authenticate ONUs. An MD-5 algorithm, adapted to be used between the OLT and the RADIUS server, in accordance with its use between the OLT and the ONUs, is simplified so that it is usable in an EPON architecture. A computer-readable recording medium recorded with a program implements the authentication method. The authentication method includes the step of sending a start code
10 from an optical network unit (ONU) to an optical line terminal (OLT). The ONU receives in response a request for an identifier of the ONU. From the ONU's response that includes the identifier, the OLT determines whether the authentication succeeds or fails and sends the respective message to the ONU, as well as an additional message informing the ONU that the authentication process has terminated.

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